IN THE CLAIMS:

The status and content of each claim follows.

1. (original) A fuel cell stack assembly, comprising:

opposing fuel cell stacks, said fuel cell stacks having a plurality of fuel cells, wherein said fuel cells include an anode, a cathode, and an electrolyte; and

a spacing member disposed between said opposing fuel cell stacks thereby defining a sealed fluidic cavity.

2. (original) The fuel cell stack assembly of claim 1, further comprising a manifold fluidly coupled to said sealed fluidic cavity.

3. (original) The fuel cell stack assembly of claim 2, further comprising:

a fluid delivery needle coupled to said manifold;

said fluid delivery needle extending into said fluidic cavity.

4. (original) The fuel cell stack assembly of claim 3, wherein said fluid delivery needle comprises:

a plurality of gradient holes disposed on said fluid delivery needle;

said gradient holes varying from a smaller size at a proximal end of said fluid delivery needle and increasing in size toward a distal end of said fluid delivery needle.

5. (currently amended) The fuel cell stack assembly of claim 2, wherein said manifold comprises:

a fuel manifold, said fluid manifold incorporating an exhaust port to remove excess fuel and waste products; and

a fuel needle coupled to said fuel manifold.

6. (original) The fuel cell stack assembly of claim 1, wherein said sealed fluidic cavity comprises a fuel cavity.

7. (original) The fuel cell stack assembly of claim 1, wherein said opposing fuel cell stacks comprise a ceramic material.

8. (original) The fuel cell stack assembly of claim 7, wherein said ceramic material comprises a porous ceramic material.

9. (original) The fuel cell stack assembly of claim 7, wherein said spacing member comprises a ceramic material.

10. (original) The fuel cell stack assembly of claim 1, wherein said spacing member and said fuel cell stacks comprise materials having matched coefficients of thermal expansion.

11. (original) The fuel cell stack assembly of claim 1, further comprising a plurality of electrical interconnects electrically coupling said plurality of fuel cells.

12. (original) The fuel cell stack assembly of claim 11, wherein said electrical interconnects comprise internal electrical interconnects.

13. (original) The fuel cell stack assembly of claim 11, further comprising a plurality of electrodes coupled to said electrical interconnects.

14. (withdrawn) The fuel cell stack assembly of claim 1, wherein said cathodes of each of said fuel cells are adjacent to said fluidic cavity.

15. (original) The fuel cell stack assembly of claim 1, wherein said anodes of each of said fuel cells are each adjacent said fluidic cavity.

16. (original) The fuel cell stack assembly of claim 1, wherein said fuel cells are connected in series.

17. (original) The fuel cell stack assembly of claim 1, wherein fuel cell stacks comprise an integrated planar array of said fuel cells.

18. (original) The fuel cell stack assembly of claim 1, wherein said fluidic cavity further comprises flow field modification features.

19. (original) The fuel cell stack assembly of claim 18, wherein said flow field modification features comprise a serpentine path.

20. (currently amended) The fuel cell stack assembly of claim 1, further comprising a fuel manifold coupled to a first end of said assembly, whereby said ~~manifold~~ fuel cell stack cantilevers from said manifold.

21. (original) An electrochemical apparatus, comprising:

at least one fuel cell stack assembly, having:

opposing fuel cell stacks, said fuel cell stacks having a plurality of fuel cells, wherein said fuel cells include an anode, a cathode, and an electrolyte;

a plurality of electrical interconnects coupled to said fuel cell stacks;

a plurality of electrodes coupled to said electrical interconnects;

a spacing member disposed between said fuel cell stacks thereby defining a fluidic cavity; and

a manifold fluidly coupled to said fluidic cavity.

22. (original) The electrochemical apparatus of claim 21, further comprising:

a plurality of opposing fuel cell stack pairs;

a spacing member disposed between each pair of fuel cell stacks; and

a fluidic cavity defined between each pair of fuel cell stacks.

23. (original) The electrochemical apparatus of claim 21, further comprising:

a fluid delivery needle coupled to said manifold;

said fluid delivery needle extending into said fluidic cavity.

24. (original) The electrochemical apparatus of claim 23, wherein said manifold comprises a fuel manifold and said fluid delivery needle comprises a fuel needle.

25. (original) The electrochemical apparatus of claim 21, wherein said fluidic cavity comprises a fuel cavity.

26. (original) The electrochemical apparatus of claim 21, wherein said fuel cell stacks comprise a ceramic material.

27. (original) The electrochemical apparatus of claim 26, wherein said ceramic material comprises a porous ceramic material.

28. (original) The electrochemical apparatus of claim 26, wherein said spacing member comprises a ceramic material.

29. (original) The electrochemical apparatus of claim 28, wherein said spacing member and said fuel cell stacks comprise materials having matched coefficients of thermal expansion.

30. (original) The electrochemical apparatus of claim 21, wherein said electrical interconnects comprise internal electrical interconnects.

31. (original) The electrochemical apparatus of claim 21, further comprising a fuel source coupled to said manifold.

32. (withdrawn) The electrochemical apparatus of claim 21, wherein said cathodes of said fuel cells are adjacent said fluidic cavity.

33. (original) The electrochemical apparatus of claim 21, wherein said anodes of said fuel cells are adjacent to said fluidic cavity.

34. (original) The electrochemical apparatus of claim 21, further comprising a plurality of said fuel cell stack assemblies.

35. (withdrawn) A method of forming a fuel cell stack assembly, comprising sealing opposing fuel cell stacks together with a spacing member to form a fluidic cavity between said fuel cell stacks.

36. (withdrawn) The method of claim 35, further comprising connecting a fluid manifold to said fluidic cavity.

37. (withdrawn) The method of claim 35, further comprising connecting a fuel supply to said manifold.

38. (withdrawn) The method of claim 35, further comprising connecting an oxidant supply to said manifold.

39. (withdrawn) The method of claim 35, further comprising disposing anodes of fuel cells in said fuel cell stacks in communication with said fluidic cavity.

40. (withdrawn) The method of claim 35, further comprising disposing cathodes of fuel cells in said fuel cell stacks in communication with said fluidic cavity.

41. (withdrawn) The method of claim 35, further comprising:
connecting said manifold to a needle extending into said fluidic chamber;
said needle having exhaust holes.

42. (withdrawn) The method of claim 41, further comprising forming exhaust holes in said needle wherein said exhaust holes are formed so as to provide a substantially uniform fuel distribution across said fuel cell stacks.

43. (withdrawn) The method of claim 35, further comprising electrically connecting fuel cells in said fuel cell stacks to draw electrical power from said fuel cells.

44. (withdrawn) A method of forming a fuel cell stack assembly, comprising:

forming a plurality of fuel cell stacks, wherein said forming of said fuel cell stacks includes:

providing a fuel cell stack substrate;

forming a plurality of fuel cells on said fuel cell stack substrate, each of said fuel cells having an anode, an electrolyte, and a cathode;

providing a fuel spacing member;

providing a fuel manifold;

sealingly coupling said plurality of fuel cell stacks and said spacing member in order to define a fluidic cavity; and

fluidly coupling said manifold with said fluidic cavity.

45. (withdrawn) The method of claim 44, further comprising forming electrical connections to said fuel cells.

46. (withdrawn) The method of claim 44, wherein said plurality of fuel cell stacks comprise a pair of fuel cell stacks.

47. (withdrawn) The method of claim 46, further comprising opposingly disposing said pair of fuel cell stacks.

48. (withdrawn) The method of claim 44, wherein said forming said fuel cells comprises using a ceramic substrate.

49. (withdrawn) The method of claim 48, wherein said ceramic substrate comprises a porous ceramic substrate.

50. (withdrawn) The method of claim 44, wherein said fuel cell stack assembly comprises:

a first end and a second end;

said fuel manifold being coupled to said fuel cell stack assembly only at said first end.

51. (original) A fuel cell system, comprising:
a plurality of fuel cell stacks;
means for supporting and separating said fuel cell stacks;
means for sealingly establishing a fluidic cavity between said fuel cell stacks; and
means for providing a fluid to said fluidic cavity.

52. (original) The fuel cell system of claim 51, wherein said fluid comprises a fuel.

53. (currently amended) The fuel cell system of claim 51, further comprising means for supplying an oxidant to an exterior of said fuel cell stacks.

54. (original) The fuel cell system of claim 51, further comprising means for withdrawing an electrical current from said system.

55. (original) The fuel cell system of claim 54, further comprising means for supplying said electrical current to an electronic device.

56. (original) The fuel cell system of claim 51, wherein said means for providing a fluid to said fluidic cavity further comprises means for providing a substantially constant quantity of said fluid along a length of said means for providing a fluid.

57. (original) The fuel cell system of claim 56, wherein said means for providing a substantially constant quantity of fluid comprises a plurality of gradient holes disposed in said means for providing a fluid.

58. (original) The fuel cell system of claim 51, further comprising means for modifying a flow field of said fluid within said fluidic cavity.

59. (original) The fuel cell system of claim 58, wherein said means for modifying a flow field of said fluid within said fluidic cavity comprises a serpentine fuel flow path.